

April-04-14 10:23:14 AM

Page 1

**Accept**

Setup Start \*NS1\*

Stop \*NS2\*

**Cust Item ID:**

**\*20\***

**\*20\***

**Customer:**

**Reference:**

Run Start \*NR1\*

Stop \*NR2\*

|                 |                     |  |
|-----------------|---------------------|--|
| <b>Draw Nbr</b> | <b>Revision Nbr</b> |  |
| D3407           | Rev E               |  |

0.00

DOOSAN LATHE

Doosan

## Memo

0.00

Doosan Lathe

1-Turn as per Folio FA597 Rev: AA - & Dwg D3407 Rev: E 2-Deburr

**DAS**  
**40**  
**9-89**

•••

111

14/04/20

110

QC2- Inspect parts off machine FAI/FAIB

0.00

## Memo

0.00

OC

## Quality Control

**DAS  
40  
8-89**

0000

14/04/90

120

QC8- Inspect parts - second check

0.00

## Memo

0.00

OC

## Quality Control

**DAS**  
**08**  
**9-89**

\_\_\_\_\_

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|  |  |   |                                      |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
|--|--|---|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--|----------------------------------|--|------------------------------------|--|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/>   | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                           | Crosstube <input type="checkbox"/>   | Water Jet <input type="checkbox"/>  | Engineering <input type="checkbox"/> |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/>   | Prod. Eng. Coord. <input type="checkbox"/>  | Quality <input type="checkbox"/>     |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/>   | Rec/Store/Packaging <input type="checkbox"/>  | Other <input type="checkbox"/>       |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/>   | Supplier <input type="checkbox"/>   |                                      |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |

| Root Cause    | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Design        |      |      |     |   |                   |                    |             |              |              |
| Doc/Data      |      |      |     |   |                   |                    |             |              |              |
| Equip/Tooling |      |      |     |   |                   |                    |             |              |              |
| Handling/Pre  |      |      |     |   |                   |                    |             |              |              |
| Material      |      |      |     |   |                   |                    |             |              |              |
| Operator      |      |      |     |   |                   |                    |             |              |              |
| Offset/Setup  |      |      |     |   |                   |                    |             |              |              |
| Process       |      |      |     |   |                   |                    |             |              |              |
| Supplier      |      |      |     |   |                   |                    |             |              |              |
| Training      |      |      |     |   |                   |                    |             |              |              |
| Transport     |      |      |     |   |                   |                    |             |              |              |
| Unapproved    |      |      |     |   |                   |                    |             |              |              |

### FAULT CATEGORY

|  |  |   |  |
|--|--|---|--|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crimp/Kink/Ripple/Wave<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Crushing<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Marks/Chatter<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damage/Defect<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete/Unqualified<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Misaligned/off center<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Off-set<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Outside Dimensions<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge<br><br><input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Set-up<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><br><input type="checkbox"/> Other |
|--|--|---|--|

# Work Order ID 115849

April-04-14 10:23:14 AM

**\*115849\***

Page 2

Item ID: D3407-3

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Stem

Start Date: 4/04/14 Start Qty: 20.00

**\*20\***

Cust Item ID:

Required Date: 4/04/14 Req'd Qty: 20.00

**\*20\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                         | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp    |
|--------------------------------|--|----------------------|---------|--------|--------------|---------------|---------------|------------------|-------------------|
| 130                            | Identify as per dwg & Stock Location <u>W200</u> | 0.00                 |         |        |              |               |               |                  |                   |
| <b>*130*</b>                   |  |                      |         |        |              |               |               |                  |                   |
| Packaging                      | Memo   | 0.00                 |         |        |              |               |               |                  |                   |
| Packaging                      |  |                      |         |        |              |               |               |                  |                   |
|                                |  |                      |         |        |              |               |               |                  | DAS<br>26<br>9-89 |
| 140                            | QC21- Final Inspection - Work Order Release      | 0.00                 |         |        |              |               |               |                  |                   |
| <b>*140*</b>                   |  |                      |         |        |              |               |               |                  |                   |
| QC                             | Memo   | 0.00                 |         |        |              |               |               |                  |                   |
| Quality Control                |  |                      |         |        |              |               |               |                  |                   |

20x 14-4-21

MLJ 14-04-21

(11) 14-04-21

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|  |  |   |                                      |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
|--|--|---|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--|----------------------------------|--|------------------------------------|--|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/>   | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                           | Crosstube <input type="checkbox"/>   | Water Jet <input type="checkbox"/>  | Engineering <input type="checkbox"/> |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/>   | Prod. Eng. Coord. <input type="checkbox"/>  | Quality <input type="checkbox"/>     |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/>   | Rec/Store/Packaging <input type="checkbox"/>  | Other <input type="checkbox"/>       |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/>   | Supplier <input type="checkbox"/>   |                                      |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |

| Root Cause                             | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|--|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Design <input type="checkbox"/>        |      |      |     |   |                   |                    |             |              |              |
| Doc/Data <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Equip/Tooling <input type="checkbox"/> |      |      |     |   |                   |                    |             |              |              |
| Handling/Pre <input type="checkbox"/>  |      |      |     |   |                   |                    |             |              |              |
| Material <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Operator <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Offset/Setup <input type="checkbox"/>  |      |      |     |   |                   |                    |             |              |              |
| Process <input type="checkbox"/>       |      |      |     |   |                   |                    |             |              |              |
| Supplier <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Training <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Transport <input type="checkbox"/>     |      |      |     |   |                   |                    |             |              |              |
| Unapproved <input type="checkbox"/>    |      |      |     |   |                   |                    |             |              |              |

### FAULT CATEGORY

|  |  |   |
|--|--|---|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crimp/Kink/Ripple/Wave<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Crushing<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Marks/Chatter<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damage/Defect<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete/Unqualified<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Misaligned/off center<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Off-set<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence |
|  |  | <input type="checkbox"/> Outside Dimensions<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge  |
|  |  | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Set-up<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other  |

# Picklist Print

April-04-14 10:23:14 AM

Page 1

Work Order ID: 115849

**\*115849\***

Parent Item: D3407-3

**\*D3407-3\***

Parent Item Name: Stem

Start Date: 4/04/14

Required Date: 4/04/14

Start Qty: 20.00

Required Qty: 20.00

**Comments:**

IPP Rev:A05.10.18New issueKJ/EC

IPP Rev:B Now on Doosan 08-05-14 JLM Verified By:DD

IPP Rev:C 08-08-12 revE as per dwg (ecn 08-507) DD verified by:EC

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status                     |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|----------------------------|
| M174R0.750                      |                        | Purchased     | No          |                     |                  | 100             | f                  | 45.0000        | 0.366       | 7.705264     |               |                |                            |
| <b>*M174R0 750*</b>             |                        |               |             |                     |                  |                 |                    |                | <b>**</b>   |              |               | 14/04/20       | <b>DAS<br/>40<br/>9-89</b> |
| 17-4 round bar .750             |                        |               |             |                     |                  |                 |                    |                |             |              |               |                |                            |

Location

Loc Qty

Loc Code

MAT030

45

→ m127647

45

815

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|  |  |   |                                      |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
|--|--|---|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--|----------------------------------|--|------------------------------------|--|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/>   | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                           | Crosstube <input type="checkbox"/>   | Water Jet <input type="checkbox"/>  | Engineering <input type="checkbox"/> |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/>   | Prod. Eng. Coord. <input type="checkbox"/>  | Quality <input type="checkbox"/>     |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/>   | Rec/Store/Packaging <input type="checkbox"/>  | Other <input type="checkbox"/>       |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/>   | Supplier <input type="checkbox"/>   |                                      |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |

| Root Cause    | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Design        |      |      |     |   |                   |                    |             |              |              |
| Doc/Data      |      |      |     |   |                   |                    |             |              |              |
| Equip/Tooling |      |      |     |   |                   |                    |             |              |              |
| Handling/Pre  |      |      |     |   |                   |                    |             |              |              |
| Material      |      |      |     |   |                   |                    |             |              |              |
| Operator      |      |      |     |   |                   |                    |             |              |              |
| Offset/Setup  |      |      |     |   |                   |                    |             |              |              |
| Process       |      |      |     |   |                   |                    |             |              |              |
| Supplier      |      |      |     |   |                   |                    |             |              |              |
| Training      |      |      |     |   |                   |                    |             |              |              |
| Transport     |      |      |     |   |                   |                    |             |              |              |
| Unapproved    |      |      |     |   |                   |                    |             |              |              |

### FAULT CATEGORY

|  |  |   |  |
|--|--|---|--|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crimp/Kink/Ripple/Wave<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Crushing<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Marks/Chatter<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damage/Defect<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete/Unqualified<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Misaligned/off center<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Off-set<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Outside Dimensions<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge<br><br><input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Set-up<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><br><input type="checkbox"/> Other |
|--|--|---|--|

|  |  |                             |
|--|--|-----------------------------|
| <b>DART AEROSPACE LTD</b>                  |  | <b>Work Order:</b> 115849   |
| <b>Description:</b> Stem                   |  | <b>Part Number:</b> D3407-3 |
| <b>Inspection Dwg:</b> D3407 <b>Rev:</b> E |  | <b>Page 1 of 1</b>          |

### FIRST ARTICLE INSPECTION CHECKLIST

☒ **First Article**
☐ **Prototype**

| Drawing Dimension | Tolerance                  | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|-------------------|----------------------------|------------------|--------|--------|----------------------|----------|
| 0.063             | +/-0.010                   | .073             | ✓      |        | VGRW                 | Plp-12   |
| 1/4-28 UNF        | Max: 0.2668<br>Min: 0.2635 | .266             | ✓      |        | MIC                  | Plp-02   |
| Major Ø           | Max: 0.249<br>Min: 0.2425  | .247             | ✓      |        | MIC                  | Plp-02   |
| Ø0.625            | +/-0.010                   | .626             | ✓      |        | VGRW                 | Plp-12   |
| Ø0.363            | +/-0.010                   | .363             | ✓      |        | "                    | "        |
| Ø0.750            | +/-0.010                   | .749             | ✓      |        | "                    | "        |
| R0.100            | +/-0.010                   | .100             | ✓      |        | Rad G                |          |
| 0.470             | +/-0.010                   | .470             | ✓      |        | VGRW                 | Plp-12   |
| 0.250             | +/-0.010                   | .253             | ✓      |        | "                    | "        |
| 2.555             | +/-0.010                   | 2.552            | ✓      |        | "                    | "        |
| 3.305             | +0.000/-0.010              | 3.300            | ✓      |        | "                    | "        |
| 4.325             | +/-0.010                   | 4.325            | ✓      |        | "                    | "        |
| 0.150             | +/-0.010                   | .154             | ✓      |        | "                    | "        |
| 0.550             | +/-0.010                   | .556             | ✓      |        | "                    | "        |
| 0.625             | +/-0.010                   | .628             | ✓      |        | "                    | "        |
| 0.250             | +0.010/-0.000              | .251             | ✓      |        | "                    | "        |
|                   |                            |                  |        |        |                      |          |
|                   |                            |                  |        |        |                      |          |
|                   |                            |                  |        |        |                      |          |
|                   |                            |                  |        |        |                      |          |
|                   |                            |                  |        |        |                      |          |

**DAS**

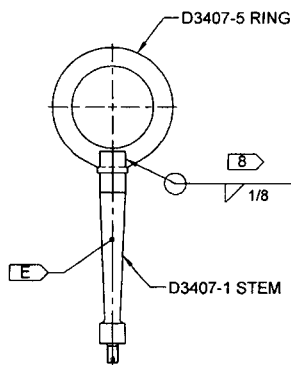
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|---------------------|------------|
| <b>Measured by:</b> | 40<br>9-89 |
| <b>Date:</b>        | 14/04/20   |

|                    |                             |
|--------------------|-----------------------------|
| <b>Audited by:</b> | A.A.      DAS<br>08<br>9-89 |
| <b>Date:</b>       | 14/04/21                    |

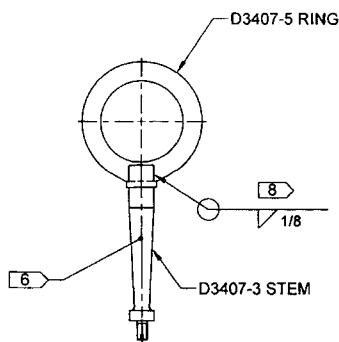
|                            |     |
|----------------------------|-----|
| <b>Prototype Approval:</b> | N/A |
| <b>Date:</b>               | N/A |

| Rev | Date     | Change                           | Revised by | Approved |
|-----|----------|----------------------------------|------------|----------|
| A   | 06.11.08 | New Issue                        | KJ/JLM     |          |
| B   | 07.09.26 | Tolerances revised               | KJ/EC      |          |
| C   | 08.05.14 | Dimensions updated per Dwg Rev D | KJ/JLM     |          |
| D   | 08.10.07 | Dimensions updated per Dwg Rev E | KJ/DD      |          |

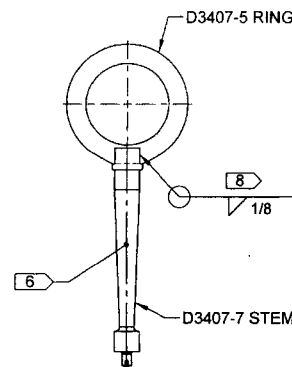
| QTY<br>-041 | QTY<br>-043 | QTY<br>-045 | PART NUMBER | DESCRIPTION |
|-------------|-------------|-------------|-------------|-------------|
| X           |             |             | D3407-041   | TOW RING    |
|             | X           |             | D3407-043   | TOW RING    |
|             |             | X           | D3407-045   | TOW RING    |
| 1           |             |             | D3407-1     | STEM        |
|             | 1           |             | D3407-3     | STEM        |
| 1           | 1           | 1           | D3407-5     | RING        |
|             |             | 1           | D3407-7     | STEM        |



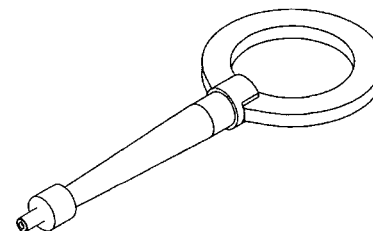
**D3407-041 TOW RING**



**D3407-043 TOW RING**



**D3407-045 TOW RING**



115849 MJS  
14-04-09

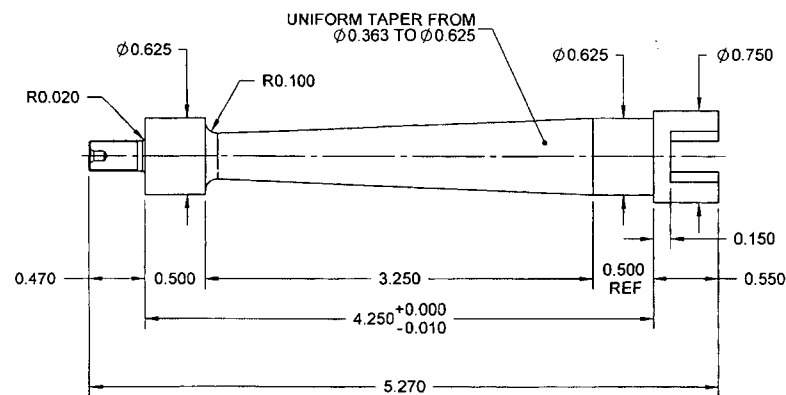
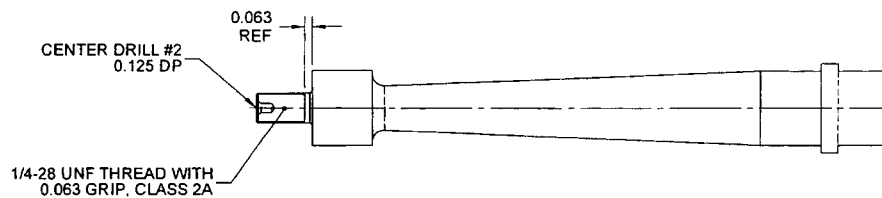
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**NOTES:**

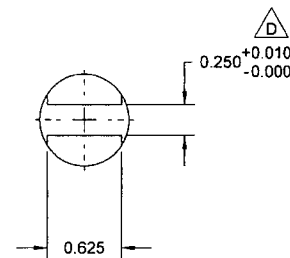
- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3 (EXCEPT THREADS)
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3407-XXX" USING BLACK FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: D3407-041 - 0.60 lbs, D3407-043 - 0.53 lbs, D3407-045 - 0.61 lbs
- 8) WELD PER DART QSI 004 ON ALL EDGES BETWEEN STEM AND RING

|            |  |   |          |
|------------|--|---|----------|
| E          | ADD D3407-045 (ZN B2-1, D8-1); ADD D3407-7 (ZN B6-5);<br>REVISED NOTE 8 TO ADD IDENTIFICATION (ZN A5-1);<br>REASON: PRODUCTION FACILITY  | PH  | 08.07.23 |
| D          | D3407-1/3 SLOT WAS ROUND NOW FLAT FOR ASSEMBLY<br>WITH D3407-5 (ZN C2-2, C2-3); D3407-5 WAS ROUND NOW<br>FLAT ON ONE END FOR ASSEMBLY WITH D3407-1/3 (ZN<br>B6-4); REASON: PRODUCTION FACILITY | PH  | 08.04.07 |
| C          | -1/3 LONGER FOR FIT W/WASHER   | CP  | 05.09.09 |
| B          | UPDATE DIAMETER, THREAD CLASS ADDED  | CP  | 05.06.17 |
| A          | NEW ISSUE  | CP  | 05.03.16 |
| REV.       | DESCRIPTION  | BY  | DATE     |
| DESIGN     | DART AEROSPACE USA, INC.   |   |          |
| DRAWN      | PORT HADLOCK, WA   |   |          |
| CHECKED    | DRAWING NO.  | REV.  |          |
| MFG. APPR. | D3407  | SHEET 1 OF 5  |          |
| APPROVED   | TITLE  | SCALE   |          |
| DE APPR.   | TOW RING   | NT  |          |
| DATE       | 08.07.23   | COPYRIGHT © 2005 BY DART AEROSPACE USA, INC.<br>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS<br>NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT<br>WRITTEN PERMISSION FROM DART AEROSPACE USA, INC. |          |





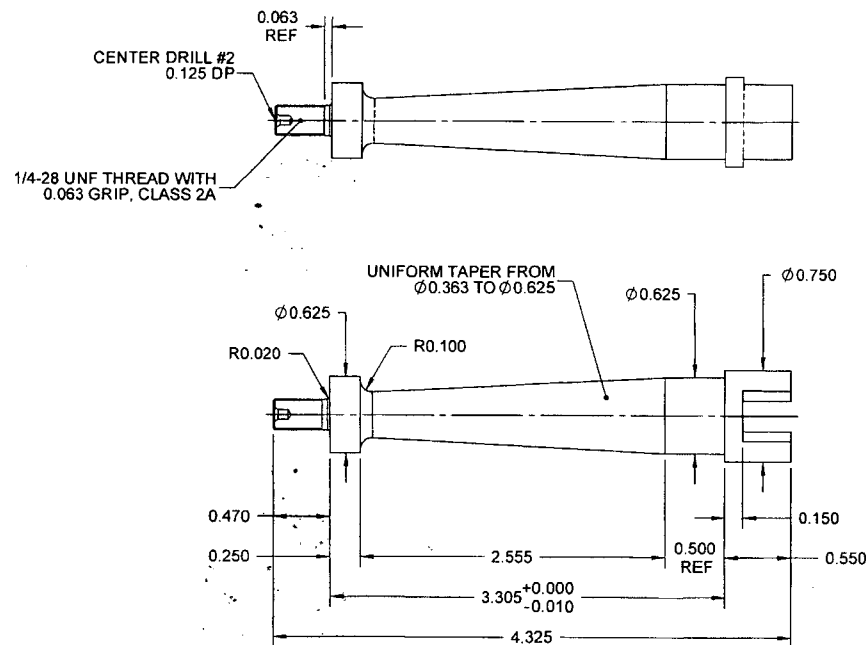
**D3407-1 STEM**



|            |          |   |              |
|------------|----------|---|--------------|
| DESIGN     |          | <b>DART AEROSPACE USA, INC.</b>   |              |
| DRAWN      |          | PORT HADLOCK, WA  |              |
| CHECKED    |          | DRAWING NO.   | REV. E       |
| MFG. APPR. |          | D3407   | SHEET 2 OF 5 |
| APPROVED   |          | TITLE   | SCALE        |
| DE APPR.   |          | TOW RING  | NTS          |
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- NOTES:
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
  - 2) FINISH: NONE
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
  - 6) IDENTIFICATION: N/A
  - 7) WEIGHT: 0.33 lbs

**RELEASED**



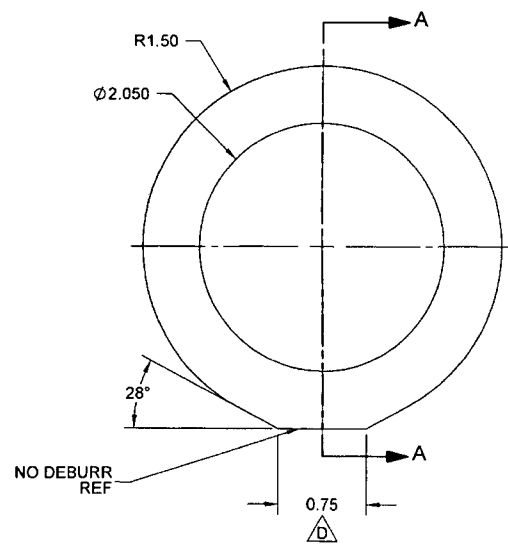
**D3407-3 STEM**

**NOTES:**

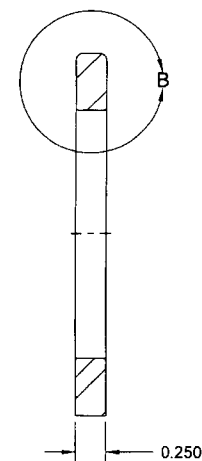
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.27 lbs

**RELEASED**

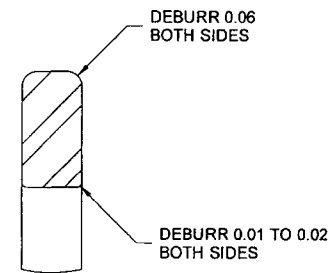
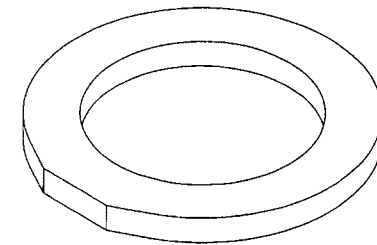
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|---|----------|--|--------------|
| DESIGN  |          | <b>DART AEROSPACE USA, INC.</b>              |              |
| DRAWN   |          | PORT HADLOCK, WA                             |              |
| CHECKED   |          | DRAWING NO.                                  | REV. E       |
| MFG APPR.   |          | D3407  | SHEET 3 OF 5 |
| APPROVED  |          | TITLE  | SCALE        |
| DE APPR.  |          | TOW RING                                     | NTS          |
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**D3407-5 RING**



**SECTION A-A**



**DETAIL B  
SCALE 2X**

**RELEASED**  
08-06-2014

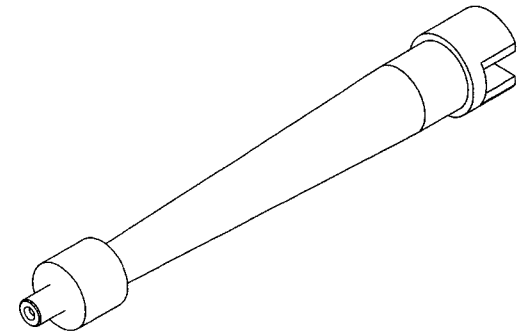
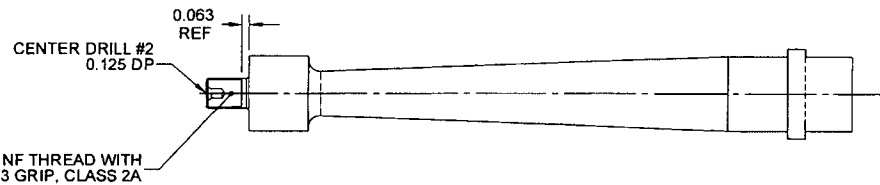
- NOTES:**
- 1) MATERIAL: 17-4 PH SS BAR PER AMS 5604/5643 (REF. DART SPEC M17-4-B)
  - 2) FINISH: NONE
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: N/A
  - 6) IDENTIFICATION: N/A
  - 7) WEIGHT: 0.27 lbs

|            |          |   |              |
|------------|----------|---|--------------|
| DESIGN     | 92       | <b>DART AEROSPACE USA, INC.</b>   |              |
| DRAWN      | 1/8      | PORT HADLOCK, WA  |              |
| CHECKED    |          | DRAWING NO.   | REV. E       |
| MFG. APPR. |          | D3407   | SHEET 4 OF 5 |
| APPROVED   |          | TITLE   | SCALE        |
| DE APPR.   |          | TOW RING  | NTS          |
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8 7 6 5 4 3 2 1

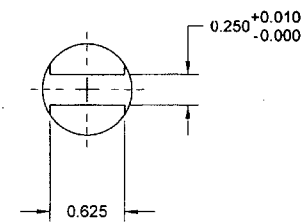
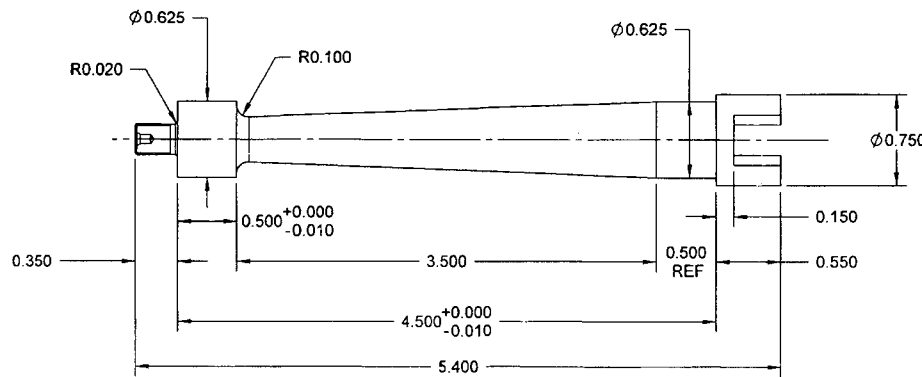
D

D



C

C







**D3407-7 STEM**

**RELEASED**

A

A

- NOTES:
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
  - 2) FINISH: NONE
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
  - 6) IDENTIFICATION: N/A
  - 7) WEIGHT: 0.34 lbs

|            |   |   |              |
|------------|---|---|--------------|
| DESIGN     | AJS   | <b>DART AEROSPACE USA, INC.</b>   |              |
| DRAWN      | IPW   | PORT HADLOCK, WA  |              |
| CHECKED    |  | DRAWING NO.   | REV. E       |
| MFG. APPR. |  | D3407   | SHEET 5 OF 5 |
| APPROVED   |  | TITLE   | SCALE        |
| DE APPR.   |  | TOW RING  | NTS          |
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8 7 6 5 4 3 2 1